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# Floreat Domus

B A L L I O L C O L L E G E N E W S

## An innovator in global healthcare and human well-being

by Anna Lewis (2003)



Alex Jadad

**Old Member of Balliol, Professor Alejandro Jadad (1992), has a mission to connect what he calls the 'high-tech' and the 'high-touch'. Information and communication technologies are changing every aspect of our lives, and Alex Jadad is leading the way, globally, in how that happens.**

When Jadad arrived at Oxford, having completed a Medicine degree in his native Colombia, he already had a vision about how to spot opportunities to innovate in his field, and how to introduce such innovations effectively into daily life – in spite of the many barriers that might confront us.

At Balliol, Jadad took the opportunity to apply these ideas to pain management, something he considered to be neglected by the health sector at large. He completed his DPhil in the field of knowledge synthesis: how best to gather, evaluate, and distil a vast amount of data. 'My time at Balliol', he explains, 'opened up several horizons for me to explore, and gave me access to powerful new tools with which to try to change the health system.'

His vision to bring about this root-and-branch change took him to Canada after Oxford, where he held positions first at McMaster University and now at the University of Toronto. He created the Centre for Global e-Health Innovation in Toronto ([www.ehealthinnovation.org](http://www.ehealthinnovation.org)), and also holds two Professorships: the Canada Research Chair in eHealth Innovation and the Rose Family Chair in Supportive Care.

## Man on a mission

Jadad's aspiration, he explains, is 'to create opportunities for humans to optimise their levels of well-being through the innovative use of information and communication technologies (ICTs), worldwide.' So how does one go about turning the health system of today into the health system of tomorrow?

He explains in the following way: 'What we have now is a big, dysfunctional collection of repair shop franchises that focus on disease, hospitals and health professionals, following an outdated, industrial-age model of health service delivery. Most of the investments in the health sector are devoted to diagnostic or therapeutic measures rather than to health enhancement.

'We have paid far too little attention to the underlying causes of poor or sub-optimal health. As a result, prevention, health promotion, and supportive care measures have been chronically under-funded, undervalued, and poorly distributed.

'Although information and communication technologies are not a panacea and will not solve all of our problems, they could enable us to challenge, re-think and re-create our roles, patterns of work, and our priorities. They could help us build a system that promotes health and well-being...that gives members of the public control over decisions related to their health and healthcare services, and the capacity to solve problems autonomously in ways that are sensitive to their unique needs, regardless of whom or where they are.'

## The Centre for Global eHealth Innovation

The Centre for Global eHealth Innovation was set up by Jadad precisely to address this potential for the innovative use of ICTs in the health system. It is a setting designed as a simulator of the future.

The Centre brings together large groups of researchers, policy-makers and community-based organisations to study and optimise the use of ICTs before their widespread introduction into the health system and society as a whole. It investigates new approaches to handle major public health threats (such as obesity, and pandemics), and it also aims to engage the public (particularly young people) in efforts to shape the health system in society.

The Centre, which occupies over 15,000 square feet of space in downtown Toronto, houses facilities including: a state-of-the-art Usability Laboratory (the first in Canada), and a Multi-Tasking Simulation Laboratory (the first in the world) dedicated exclusively to the study of eHealth innovations; and the Virtual Engagement Platform, which Jadad describes as 'a highly advanced collection of online and physical resources enabling efficient collaboration to take place across remote locations, worldwide.'



*State-of-the-art touch screens allow innovators to record, edit, transmit and share the data (e.g. sound, images, and measurements) generated in the laboratories at the Centre for Global eHealth Innovation. In this case, the screen shows a simulated bedroom.*



Two important barriers often hinder the development of research on eHealth innovation. First, innovators have limited access to the environments where health-related decisions and 'information exchange' happen. Second, innovations cannot usually be tested in the real world without serious disruption to health service activities.

The Centre's Usability and Multi-Tasking Laboratories allow new technologies to be evaluated under controlled conditions, in areas that simulate many real-world settings.

The environments include testing and observation rooms, enabling researchers to watch and record users' interactions with technologies. Remotely-controlled video cameras and microphones are used to capture these interactions, and this provides rich information on users'

*At the Centre, a multi-disciplinary team evaluates eHealth innovations in laboratories that can be completely reconfigured, working with smart mannequins, actors or real-world users.*

perceptions about the content, functionality, error proneness, and user-friendliness of the systems during use. The testing rooms are reconfigurable, with props and theatre staging used to simulate virtually any healthcare and home environment including clinic waiting rooms,

operating rooms, intensive care units, consultation rooms, and nursing stations.

Following testing and refinement in these environments, researchers can introduce the newly developed applications into the real world with maximum likelihood of uptake and minimum disruption.

### Overhauling the healthcare system

It is one thing to have bold ideas and another to see them implemented on a national or international scale. A rapid overhaul of the health system in Canada or elsewhere in the world is not on the cards.

“We will probably be more likely to change the delivery of health services”, Jadad remarks, “by investing our energy and resources in efforts to understand local conditions and strengths at all levels within the system; by figuring out what is valuable for each group of stakeholders; by identifying their paths of least resistance to change; and by instituting relatively small changes.”

A large part of this is to make the right choices easy for people. Jadad explains, “Healthcare services are provided within a very complex system ? full of entrenched practices and competing interests ? which has resisted transformative efforts for centuries. Recipes to solve our current problems are unlikely to exist. Although it may sound paradoxical, our chances of influencing the delivery of health services may be greater if health professionals and managers feel that the system is stable. If they do not feel threatened, it will be easier for them to emerge from their defensive enclave, to collaborate with colleagues and the public, and to improve their practice.”

Canada has been a good place for Jadad to introduce his experimental approach. As he says, “Canada is an ideal living laboratory for the creation of an efficient and just global health system. It is home to over 30 million people who represent more than 200 ethno-cultural groups, and it has a very sophisticated information and communication technology infrastructure.

“If Canada is to have a fair and efficient healthcare system, it must meet the ?global? needs of its multicultural population, locally. On the other hand, the fact that Canada has never been an empire has created unique opportunities to forge strong global collaborative efforts which are not hindered by traditional cultural, historical, and political boundaries.”

“Alex Jadad has ridden the wave of democratisation of medicine for the consumer via the Web, and the parallel wave of information provision for the professional.”



*In multi-tasking testing environments at the Centre, researchers can create high-fidelity simulations to evaluate eHealth innovations. Here, a simulated operating theatre is used to test an anaesthesia information system under high-stress conditions.*

### A human bridge

Good healthcare should transcend borders, and a key aspect of Jadad’s work is the promotion of global collaborative efforts across traditional boundaries ? geographic, institutional, disciplinary, cultural and linguistic.

He is the founding President of the Spanish eHealth Foundation, which has enabled the formation of the Spanish eHealth Network and of the leading journal and portal in the Hispanic world focused on eHealth ([www.revistaesalud.com](http://www.revistaesalud.com)). The Network’s platform reaches tens of thousands of unique visitors every month, from 18 different Spanish-speaking countries.

The Network, which is co-ordinated from Spain and includes projects in several Latin-American countries supported by the Canadian and Spanish governments, is working to ensure that solutions and innovations can be both adapted to, and adopted by, health systems worldwide.

Jadad is convening the Global eHealth and



Wellness Network Initiative (GENI, pronounced as ?genie?), which, he remarks, ?seeks to promote collaboration among leading groups from around the world interested in technologically-assisted living environments, social networks and virtual supportive communities.?

Given his interests, he is also looking at ways to work collaboratively with the Oxford Internet Institute, based at Balliol, and headed by Professor Bill Dutton ([www.oii.ox.ac.uk](http://www.oii.ox.ac.uk)).

In finding out about Jadad?s work, I have been repeatedly struck by how he has steadfastly pursued his vision and acted on it. Working at the interface of clinical medicine, cutting-edge research, practical innovation, and public engagement, he is ahead of his time and describes himself as a ?human bridge?. As he explains, ?I enjoy connecting what seems to be un-connectable, particularly if it happens many years before it was meant to occur. I also like to focus on major gaps that separate what could be from what is happening.?

### **In a hurry, but not rushing**

Jadad?s supervisor in Oxford, Henry McQuay says that ?Alex and [his wife] Martha Garcia made a huge leap of faith crossing the world to come to Oxford for a DPhil. Their Oxford experience acted as the springboard for his meteoric career in Canada, and we are all glad and proud for their success. Precisely where the Web?s interaction with medicine will take us, none of us, of course, has any idea. Alex has ridden the wave of democratisation of medicine for the consumer via the Web, and the parallel wave of information provision for the professional. He has more than made the most of the opportunities that have come his way, and has a breadth to him that smacks of a Balliol graduate!?

Why is Jadad in such a hurry in his pursuit of public well-being in this changing environment of global eHealth with its wireless networks, mobile computing tools, and the Internet? What motivates him to pursue his aims so passionately?

As someone who has spent a lifetime in palliative care, the simple explanation can be found in a phrase which he repeats often: ?Life is too short.?

*Randomized Controlled Trials: Questions, Answers and Musings (2nd edition) by Alejandro R Jadad and Murray W Enkin has just been published by Blackwell Publishing (ISBN: 9781405132664): [www.blackwellpublishing.com](http://www.blackwellpublishing.com).*

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